

WHAT IS CLAIMED IS:

1. A method of formulating a powder containing nanoparticles for aerosol delivery to the lung, the method comprising the steps of:
mixing nanoparticles with a liquid carrier to create a mixture; and
forming the mixture into carrier particles having a size suitable for aerosol delivery to the lung.
2. The method of claim 1 in which the mixture is formed into carrier particles by drying followed by breaking up the dried mixture.
3. The method of claim 1 in which the mixture is formed into carrier particles by spray drying.
4. The method of claim 1 in which the mixture is formed into carrier particles by freeze spray drying.
5. The method of claim 1 in which the nanoparticles contain an active agent selected from the group consisting of therapeutic, diagnostic and preventative agents.
6. The method of claim 1 in which the carrier particles have a mass median aerodynamic diameter between 1 μm and 5 μm .
7. A method of treating a human being, the method comprising the steps of:
forming a carrier particle by the method steps of claim 1, in which the nanoparticles contain an active agent; and
delivering the carrier particle to the lung of the human being by aerosol delivery.
8. The method of claim 7 in which the active agent is selected from the group consisting of therapeutic, diagnostic and preventative agents.

9. The method of claim 8 in which the active agent is a therapeutic agent.
10. The method of claim 8 in which the active agent is a diagnostic agent.
11. The method of claim 8 in which the active agent is a preventative agent
12. The method of claim 8 in which the active agent is radiation.
13. The method of claim 8 in which the active agent is selected from the group consisting of immuno-modulator and vaccine.